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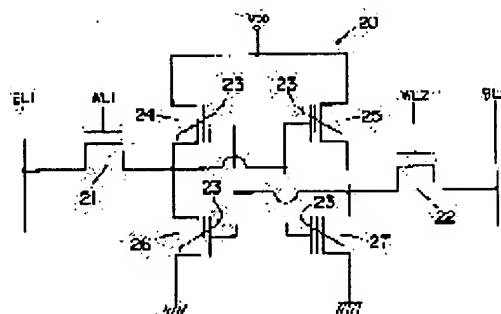
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(54) NONVOLATILE STORAGE ELEMENT

(57)Abstract:

PURPOSE: To remarkably reduce the area of a memory cell and to read nondestructively by providing a ferroelectric substance film accumulating electric charge in four field-effect transistors of a flip-flop circuit storing information.

CONSTITUTION: The flip-flop circuit 20 is constituted of four MFSFETs 24, 25, 26, 27 having a ferroelectric substance gate film 23 and a pair of FETs 21, 22 for write and read are connected to the flip-flop circuit 20 respectively. Then, a control circuit controlling connection between usual flip-flop circuit and a ferroelectric substance capacitor is unnecessary and then the area of the memory cell is reduced remarkably. Further, since a channel forming state is held with the residual polarization of the ferroelectric substance film 23 by the MFSFETs 24, 25, 26, 27, a state immediately before power source is turned off is held by the flip-flop circuit 20 even when power source is turned off and nondestructive reading is performed.



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